REMARKS

The present application includes pending claims 1-20, all of which have been rejected. It is respectfully submitted that the pending claims define allowable subject matter.

Claims 1, 2, 4, 8, 14, 16 and 20 have been rejected under 35 U.S.C. 102(b) as being anticipated by WO 01/25808 ("Feenan"). Claims 3, 5-7, 9-13, 15 and 17-19 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Feenan in view of United States Patent No. 4,594,781 ("Hirata"). The Applicants respectfully traverse these rejections at least for the reasons discussed hereafter.

The Applicants first turn to the rejection of claim 1, 2, 4, 8, 14, 16 and 20 as being anticipated by Feenan. Feenan "relates to acoustic liners for magnetic filed gradient coils, in particular those used for magnetic resonance imaging (MRI)." Feenan at page 1, lines 3-4. "A gradient coil 2 is placed centrally in the magnet bore and is physically mounted either to the magnet 1 or to a separate floor mounted support (not shown)." *Id.* at page 6, lines 11-13. An acoustic liner having acoustic coils as shown in Figure 2 of Feenan, is configured to mount to the gradient coil 2. In particular, the "complete sandwich construction is placed in the bore of a gradient coil 2 and bonded to the inner surface of it." *Id.* at page 7, lines 1-2.

Notably, Feenan only discloses an acoustic liner positioned on one side of one gradient coil, but does not teach, nor suggest, that the acoustic liner is sandwiched between first and second gradient coils. Figure 3 of Feenan shown the position of the acoustic liner with respect to the gradient coil. As clearly shown in Feenan, the acoustic liner 20 is positioned within the a bore of the gradient coil 15. However, Feenan does not teach, nor suggest, that the acoursitc liner is sandwiched within the gradient coil 15, or an additional gradient coil that sandwiches the acoustic liner between it and the gradient coil 15. Feenan does not teach, nor suggest, a

"damping layer sandwiched between... inner and outer gradient coil assemblies," as recited in claims 1 and 14. Thus, the Applicants respectfully submit that claims 1, 14 and the claims that depend from those claims, should be in condition for allowance at least for this reason.

With respect to claim 2, the Applicants respectfully submit that Feenan does not teach, nor suggest, a "high modulus cylinder sandwiched between two viscoelastic layers." Instead, Figure 2 of Feenan shows a thin compressible insulating material 12 placed between conducting sheets 9, 11 and an outer flexible sheet 13. *See id.* at Figure 2, and page 6, lines 27-31. The insulating material 12 is sandwiched between sheets. Feenan, however, does not teach, nor suggest, a high modulus cylinder sandwiched between two viscoelastic layers. Thus, at least for this reason, claim 2 should be in condition for allowance.

The Applicants now turn to the rejection of claims 3, 5-7, 9-13, 15 and 17-19 under 35 U.S.C. 103(a) as being unpatentable over Feenan in view of Hirata. Hirata discloses a "nuclear magnetic resonance imaging apparatus capable of considerably reducing the disturbing acoustic noises originating from the vibration of the gradient coil." Hirata at Abstract. Hirata, however, only discloses one gradient coil assembly 21, which includes

> a X-coil 25, a Y-coil 27, and a Z-coil 29 would around a coil core 23, each of which produces the gradient field in X-, Y, and Z-directions, respectively. Also, as shown in FIG. 4, these X-coil 25, Y-coil 27, and Z-coil 29 are fixed on the coil core 23 by molding with a non-magnetic resin 24 with a relatively large Young's3s (sic) modulus, such as epoxy resin.

Id. at column 1, lines 33-47. All of these components make up a single gradient coil assembly 21. Hirata discloses imaging systems that include only one gradient coil assembly, such as gradient coil 21. A viscoelastic layer 9 is positioned with respect to the gradient coil 21. The

viscoelastic layer, however, is only positioned with respect to a single gradient coil assembly. Hirata does not teach, nor suggest, "pouring a liquid viscoelastic material into [a] space [between a first gradient coil assembly and a second gradient coil assembly]," as recited, for example, in claim 9 of the present application. Neither Feenan, nor Hirata, alone or in combination with one another, teaches or suggests a damping layer, such as a viscoeleastic material, sandwiched between two separate and distinct gradient coil assemblies. Therefore, claims 9-13 should be in condition for allowance at least for this reason.

The Applicants respectfully submit that the claims of the present application should be in condition for allowance at least for the reasons discussed above. The Applicants request reconsideration of the application and look forward to working with the Examiner to resolve any remaining issues in the application. If the Examiner has any questions or the Applicant can be of any assistance, the Examiner is invited to contact the Applicants. The Commissioner is authorized to charge any necessary fees or credit any overpayment to Applicants' Deposit Account 07-0845.

Respectfully submitted,

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